

LIST OF CURRENT CLAIMS

1. (Currently Amended) A method for despreading a received spread spectrum signal, comprising the steps of:
 - transforming said received signal;
 - multiplying said transformed signal with a set of transformed spreading codes; and
 - summing said multiplied signal to generate a despread signal, wherein said transformed spreading codes ~~[[is]]~~ are generated by transforming spreading codes using a transformation method, comprising the steps of:
 - splitting two bits from a spreading code alternately into I and Q data;
 - converting said I and Q data;
 - inserting zeros alternately into said I and Q data;
 - inserting an initial condition for said I and Q data; and
 - calculating transformed output as a function of said I and Q data.
2. (Original) A method as recited in claim 1 further including an additional step after said summing step for canceling by-products from said despread signal.
3. (Original) A method as recited in claim 1 wherein said transforming step and said transformed spreading codes use the same transformation.
4. (Cancelled)
5. (Previously Presented) A method as recited in claim 1 wherein in said inserting zeros step the first zero is inserted after the first bit of said I data and the first zero is inserted before the first bit of said Q data.
6. (Previously Presented) A method as recited in claim 1 wherein said inserting an initial condition step a zero is inserted for said I data and a -1 or 1 is inserted for said Q data.
7. (Previously Presented) A method as recited in claim 1 wherein in said calculating step the

equation, $y(k)=I(k-1)Q(k)-I(k)Q(k-1)$, is used for calculating said transformed codes.

8. (Original) A method as recited in claim 2 wherein said canceling step comprises the following substeps: summing M samples, where M is an integer;
subtracting $4/M$ from said output for said transformed spreading codes in the range of 1-8; and
adding $4/M$ to said output for said transformed spreading codes in the range of 9-16.

9. (Currently Amended) A method for despreading a received, sampled spread spectrum signal, comprising the steps of:

transforming said received signal; down sampling said transformed signal;
multiplying said down sampled signal with a set of transformed spreading codes; and
summing said multiplied signal to generate a despread signal; and
~~canceling by products from said despread signal;~~
~~wherein said canceling step is performed as a function of an average of said down sampled signal and said despread signal wherein said transformed spreading codes are generated by transforming spreading codes using a transformation method, including the steps of:~~
splitting two bits from a spreading code alternately into I and Q data;
converting said I and Q data; inserting zeros alternately into said I and Q data;
inserting an initial condition for said I and Q data; and
calculating transformed output as a function of said I and Q data.

- 10.-11. (Cancelled)

12. (Original) A method as recited in claim 9 wherein said transforming step and said transformed spreading codes use the same transformation.

13. (Cancelled)

14. (Currently Amended) A method as recited in claim [[13]] 9 wherein in said inserting zeros step the first zero is inserted after the first bit of said I data and the first zero is inserted before the first bit of said Q data.

15. (Currently Amended) A method as recited in claim [[13]] 9 wherein said inserting an initial condition step a zero is inserted for said I data and a -1 or 1 is inserted for said Q data.
16. (Currently Amended) A method as recited in claim [[13]] 9 wherein in said calculating step the equation, $y(k)=I(k-1)Q(k)-I(k)Q(k-1)$, is used for calculating said transformed codes.
17. (Currently Amended) A method as recited in claim [[9]] 22 wherein said canceling step comprises the following substeps:
 - summing M samples, where M is an integer;
 - subtracting $4/M$ from said output for said transformed spreading codes in the range of 1-8; and
 - adding $4/M$ to said output for said transformed spreading codes in the range of 9-16.
18. (Original) A method for converting spreading codes for de-spreading a spread spectrum signal to transformed codes for de-spreading said spread spectrum signal, said spreading codes comprising of 0's and 1's, comprising the steps of:
 - splitting two bits from a spreading code alternately into I and Q data;
 - converting said I and Q data; inserting zeros alternately into said I and Q data;
 - inserting an initial condition for said I and Q data; and
 - calculating transformed codes as a function of said I and Q data.
19. (Original) A method as recited in claim 18 wherein in said inserting zeros step the first zero is inserted after the first bit of said I data and the first zero is inserted before the first bit of said Q data.
20. (Original) A method as recited in claim 18 wherein said inserting an initial condition step a zero is inserted for said I data and a -1 or 1 is inserted for said Q data. —
21. (Original) A method as recited in claim 18 wherein in said calculating step the equation, $y(k)=I(k-1)Q(k)-I(k)Q(k-1)$, is used for calculating said transformed codes.
22. (New) A method as recited in claim 9 further including an additional step after said summing step for canceling by-products from said despread signal.

23. (New) A method as recited in claims 22 wherein said canceling step is performed as a function of an average of said down sampled signal and said despread signal.